

WE CLAIM

1. A structured system for monitoring and controlling the engineering equipment in an installation, mainly a building comprising several floors, that includes a central computer module with an input-output device as well as a plurality of monitoring and/or measuring and/or control sensors and/or control devices for (the units) and apparatus of the engineering equipment in the building connected via communications hubs to a centralized power supply system and (the units) for independent control of said equipment, said computer module consisting of a programmable computer server station having functions, according to the software, that provide for the centralized acquisition of monitoring data through information channels within a single network protocol, as well as for the processing of said data and for the output of control signals to the control devices for (the units) and apparatus of the engineering equipment in the building, wherein (it) includes controllers placed at the points of location of the communications hubs connected in a hierarchical-star circuit or a bus circuit to the central distribution frame of the centralized power supply system and units for off-line control of the engineering equipment, with the controllers further connected in a hierarchical-star circuit or a bus circuit to the input-output device of the central computer module, each of said controllers having a plurality of remote input-output modules connected serially or in above-mentioned star circuit thereto, while each of said modules has a corresponding monitoring and/or measuring and/or control sensor and/or control device for a specific unit or apparatus of the engineering equipment in the building connected thereto, and in that it includes at least one additional computer station linked through its input-output module via the local area network with the central computer module and, via a dedicated channel, with the corresponding controller that ensures, according to the software, the local monitoring and the control of (the units) and apparatus in at least one functionally independent section of the engineering equipment in the building, the additional computer stations being connected with one another over an information channel in a hierarchical-star circuit via local area network hubs interposed in the dedicated channels.

2. A system according to Claim 1, wherein each controller has a plurality of remote input-output modules connected thereto, the modules being linked to said sensors

or control devices for (the units) and apparatus in at least one functionally independent section of the engineering equipment in the building.

3. A system according to Claim 1 or Claim 2, wherein the functionally independent section of the engineering equipment in the building is represented by the apparatus and units of the lift equipment, or pump equipment, or heat supply station, or electric power supply system of the building.

4. A system according to Claim 1, wherein the sensors and control devices that put out information-carrying signals in a format other than the protocol of the common network are connected to the corresponding controller via a converter that converts data of one network protocol to data of another network protocol.

5. A system according to Claim 1, wherein (it) is connected to a plurality of uninterrupted power supplies.

6. A system according to Claim 1, wherein level, flow, temperature and pressure sensors, respectively, are used therein as the monitoring and measuring sensors.

7. A system according to Claim 1, wherein infrared sensors, photosensors, heat sensors are used therein as the control sensors.

8. A system according to Claim 1, wherein the control devices are servo drives or drives having the function of performing an action in response to the signal from a sensor.

9. A system according to Claim 8, wherein said drives and servo drives are apparatus for controlling the position of blinds and devices for remote opening/closing of doors or on/off switching of lights.

10. A system according to Claim 1, wherein the central computer module is provided with means for connection thereof to an external global network to permit communication with other external monitoring and control systems.

